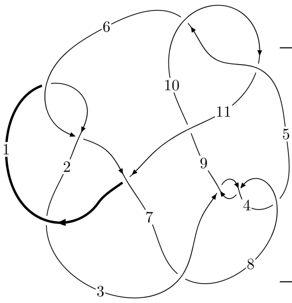
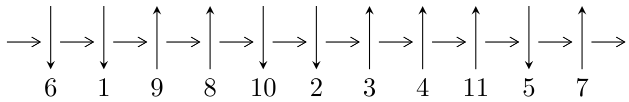
$11a_{187}$ ($K11a_{187}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$2{,}6 \xrightarrow[c_6]{} 7 \xrightarrow[c_1]{} 1 \xrightarrow[c_2]{} 3 \xrightarrow[c_7]{} 8{,}10 \xrightarrow[c_5]{} 5 \xrightarrow[c_4]{} 4 \xrightarrow[c_{11}]{} 11 \xrightarrow[c_9]{} 9 \twoheadrightarrow c_3, c_8, c_{10}$$

Ideals for irreducible components[2] of $X_{\mathbf{par}}$

$$I_1^u = \langle 2u^{43} + 2u^{42} + \cdots + 4b + 2,\ 2u^{43} + u^{42} + \cdots + 4a + 4,\ u^{44} + 2u^{43} + \cdots + 3u + 2 \rangle$$

$$\begin{aligned} I_2^u = \langle & -42u^5a^2 + 6u^5a + \cdots - 33a - 16, \\ & 2u^4a^2 + u^5a - 2u^3a^2 + 2u^4a + u^5 - 2a^2u^2 - u^4 + a^3 + 2a^2u - 3u^2a + u^3 + 2au + 2u^2 + a - 2u + 1, \\ & u^6 - u^5 - u^4 + 2u^3 - u + 1 \rangle \end{aligned}$$

$$I_3^u = \langle u^3 + b,\ -u^3 - u^2 + a + u + 1,\ u^4 - u^2 + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 66 representations.

[1] The image of knot diagram is generated by the software "**Draw programme**" developed by Andrew Bartholomew(`http://www.layer8.co.uk/maths/draw/index.htm#Running-draw`), where we modified some parts for our purpose(`https://github.com/CATsTAILs/LinksPainter`).

[2] All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I.

$$I_1^u = \langle 2u^{43}+2u^{42}+\cdots+4b+2,\ 2u^{43}+u^{42}+\cdots+4a+4,\ u^{44}+2u^{43}+\cdots+3u+2\rangle$$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^3 \\ -u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^8 - u^6 + u^4 + 1 \\ u^8 - 2u^6 + 2u^4 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -\frac{1}{2}u^{43} - \frac{1}{4}u^{42} + \cdots - \frac{1}{4}u - 1 \\ -\frac{1}{2}u^{43} - \frac{1}{2}u^{42} + \cdots + \frac{1}{4}u - \frac{1}{2} \end{pmatrix}$$

$$a_5 = \begin{pmatrix} \frac{1}{2}u^{43} - 5u^{41} + \cdots + \frac{9}{4}u + 1 \\ -\frac{1}{4}u^{39} + \frac{9}{4}u^{37} + \cdots + \frac{1}{2}u + 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -\frac{1}{4}u^{34} + \frac{7}{4}u^{32} + \cdots + \frac{1}{2}u + \frac{1}{2} \\ -\frac{1}{4}u^{36} + 2u^{34} + \cdots - \frac{3}{4}u^2 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -\frac{1}{2}u^{43} + 5u^{41} + \cdots - \frac{1}{4}u - 1 \\ -u^{43} - u^{42} + \cdots - \frac{3}{2}u - 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -\frac{1}{2}u^{43} + 5u^{41} + \cdots - \frac{1}{4}u - 1 \\ -u^{43} - u^{42} + \cdots - \frac{3}{2}u - 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2u^{43} + 20u^{41} + 4u^{40} - 104u^{39} - 36u^{38} + 356u^{37} + 168u^{36} - 886u^{35} - 516u^{34} + 1682u^{33} + 1152u^{32} - 2512u^{31} - 1966u^{30} + 3018u^{29} + 2658u^{28} - 2988u^{27} - 2940u^{26} + 2506u^{25} + 2762u^{24} - 1828u^{23} - 2288u^{22} + 1160u^{21} + 1706u^{20} - 614u^{19} - 1138u^{18} + 234u^{17} + 680u^{16} - 8u^{15} - 356u^{14} - 126u^{13} + 132u^{12} + 148u^{11} + 30u^{10} - 90u^9 - 66u^8 + 36u^6 + 8u^5 + 12u^4 - 4u^3 - 4u^2 - 12u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{44} + 2u^{43} + \cdots + 3u + 2$
c_2	$u^{44} + 20u^{43} + \cdots - 19u + 4$
c_3, c_4, c_8	$u^{44} - u^{43} + \cdots - 16u + 1$
c_5, c_{10}	$u^{44} - u^{43} + \cdots - 2u + 1$
c_7	$u^{44} - 2u^{43} + \cdots - 496u + 32$
c_9	$u^{44} - 21u^{43} + \cdots - 6u + 1$
c_{11}	$u^{44} + 6u^{43} + \cdots + 352u + 128$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{44} - 20y^{43} + \cdots + 19y + 4$
c_2	$y^{44} + 8y^{43} + \cdots - 417y + 16$
c_3, c_4, c_8	$y^{44} + 41y^{43} + \cdots - 90y + 1$
c_5, c_{10}	$y^{44} + 21y^{43} + \cdots + 6y + 1$
c_7	$y^{44} - 18y^{43} + \cdots - 81664y + 1024$
c_9	$y^{44} + 9y^{43} + \cdots + 26y + 1$
c_{11}	$y^{44} + 4y^{43} + \cdots + 400384y + 16384$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.614083 + 0.757021I$ $a = -0.632443 + 1.216370I$ $b = -0.484382 - 1.114490I$	$1.31355 - 6.59166I$	$2.43428 + 6.77222I$
$u = 0.614083 - 0.757021I$ $a = -0.632443 - 1.216370I$ $b = -0.484382 + 1.114490I$	$1.31355 + 6.59166I$	$2.43428 - 6.77222I$
$u = 0.821139 + 0.488156I$ $a = -0.927633 + 0.608891I$ $b = -0.072544 - 0.992801I$	$1.71974 - 2.04449I$	$8.09534 + 3.92627I$
$u = 0.821139 - 0.488156I$ $a = -0.927633 - 0.608891I$ $b = -0.072544 + 0.992801I$	$1.71974 + 2.04449I$	$8.09534 - 3.92627I$
$u = -0.862505 + 0.618420I$ $a = 0.449298 + 0.919851I$ $b = 0.296344 - 0.458666I$	$-1.78260 + 2.32403I$	$-3.34006 - 4.18594I$
$u = -0.862505 - 0.618420I$ $a = 0.449298 - 0.919851I$ $b = 0.296344 + 0.458666I$	$-1.78260 - 2.32403I$	$-3.34006 + 4.18594I$
$u = 1.073220 + 0.159361I$ $a = -1.46758 + 0.81560I$ $b = -0.486107 + 1.058250I$	$-0.00015 + 3.23140I$	$-0.12341 - 4.01153I$
$u = 1.073220 - 0.159361I$ $a = -1.46758 - 0.81560I$ $b = -0.486107 - 1.058250I$	$-0.00015 - 3.23140I$	$-0.12341 + 4.01153I$
$u = -0.650664 + 0.627229I$ $a = -0.005189 + 0.303137I$ $b = -0.553759 - 0.162746I$	$-1.24285 + 2.41947I$	$-1.11371 - 3.27345I$
$u = -0.650664 - 0.627229I$ $a = -0.005189 - 0.303137I$ $b = -0.553759 + 0.162746I$	$-1.24285 - 2.41947I$	$-1.11371 + 3.27345I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.383154 + 0.817621I$ $a = -0.699793 - 1.003430I$ $b = -0.559403 + 1.175300I$	$0.02553 + 9.64814I$	$1.87633 - 5.89081I$
$u = 0.383154 - 0.817621I$ $a = -0.699793 + 1.003430I$ $b = -0.559403 - 1.175300I$	$0.02553 - 9.64814I$	$1.87633 + 5.89081I$
$u = -0.541524 + 0.710426I$ $a = 0.69602 + 1.31058I$ $b = 0.390858 - 1.163740I$	$5.49978 + 2.81685I$	$7.91209 - 3.62313I$
$u = -0.541524 - 0.710426I$ $a = 0.69602 - 1.31058I$ $b = 0.390858 + 1.163740I$	$5.49978 - 2.81685I$	$7.91209 + 3.62313I$
$u = -1.012810 + 0.465132I$ $a = 0.56553 + 1.48232I$ $b = 0.441089 + 0.401407I$	$-2.03263 + 1.73845I$	$-4.12033 - 0.48900I$
$u = -1.012810 - 0.465132I$ $a = 0.56553 - 1.48232I$ $b = 0.441089 - 0.401407I$	$-2.03263 - 1.73845I$	$-4.12033 + 0.48900I$
$u = -0.406877 + 0.760900I$ $a = 0.879442 - 1.067170I$ $b = 0.490957 + 1.153170I$	$4.79783 - 5.37629I$	$6.38044 + 4.26424I$
$u = -0.406877 - 0.760900I$ $a = 0.879442 + 1.067170I$ $b = 0.490957 - 1.153170I$	$4.79783 + 5.37629I$	$6.38044 - 4.26424I$
$u = 1.059790 + 0.421005I$ $a = 2.19306 + 0.61348I$ $b = 0.508638 + 0.730201I$	$-2.20066 - 4.83120I$	$-3.00848 + 8.38874I$
$u = 1.059790 - 0.421005I$ $a = 2.19306 - 0.61348I$ $b = 0.508638 - 0.730201I$	$-2.20066 + 4.83120I$	$-3.00848 - 8.38874I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.136200 + 0.221185I$ $a = 1.46732 + 0.20761I$ $b = 0.820180 + 0.375098I$	$-7.36306 + 1.79166I$	$-7.40265 - 0.27193I$
$u = 1.136200 - 0.221185I$ $a = 1.46732 - 0.20761I$ $b = 0.820180 - 0.375098I$	$-7.36306 - 1.79166I$	$-7.40265 + 0.27193I$
$u = -0.340701 + 0.765223I$ $a = -0.166604 - 0.002494I$ $b = -0.831807 + 0.245624I$	$-2.73686 - 4.51181I$	$-1.28953 + 2.54030I$
$u = -0.340701 - 0.765223I$ $a = -0.166604 + 0.002494I$ $b = -0.831807 - 0.245624I$	$-2.73686 + 4.51181I$	$-1.28953 - 2.54030I$
$u = -1.163100 + 0.154076I$ $a = 1.25749 + 0.76708I$ $b = 0.592275 + 1.120500I$	$-5.13953 - 7.03997I$	$-4.35205 + 4.78449I$
$u = -1.163100 - 0.154076I$ $a = 1.25749 - 0.76708I$ $b = 0.592275 - 1.120500I$	$-5.13953 + 7.03997I$	$-4.35205 - 4.78449I$
$u = -1.023700 + 0.599662I$ $a = 0.681062 + 0.160774I$ $b = -0.337241 - 1.172950I$	$4.07169 + 2.20922I$	$5.83455 - 2.04205I$
$u = -1.023700 - 0.599662I$ $a = 0.681062 - 0.160774I$ $b = -0.337241 + 1.172950I$	$4.07169 - 2.20922I$	$5.83455 + 2.04205I$
$u = 0.989262 + 0.656622I$ $a = -0.585610 + 0.177116I$ $b = 0.449630 - 1.070930I$	$0.200378 + 1.249410I$	$0.49362 - 2.01846I$
$u = 0.989262 - 0.656622I$ $a = -0.585610 - 0.177116I$ $b = 0.449630 + 1.070930I$	$0.200378 - 1.249410I$	$0.49362 + 2.01846I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.154760 + 0.388979I$ $a = -0.93774 + 1.14513I$ $b = -0.753378 + 0.721249I$	$-9.26869 - 1.33308I$	$-7.30769 + 0.69505I$
$u = 1.154760 - 0.388979I$ $a = -0.93774 - 1.14513I$ $b = -0.753378 - 0.721249I$	$-9.26869 + 1.33308I$	$-7.30769 - 0.69505I$
$u = -1.155640 + 0.451289I$ $a = -2.06743 + 0.02294I$ $b = -0.716747 + 0.865040I$	$-8.84980 + 6.81745I$	$-6.19135 - 6.52038I$
$u = -1.155640 - 0.451289I$ $a = -2.06743 - 0.02294I$ $b = -0.716747 - 0.865040I$	$-8.84980 - 6.81745I$	$-6.19135 + 6.52038I$
$u = -1.101670 + 0.589261I$ $a = -2.50240 - 0.70880I$ $b = -0.527845 + 1.156650I$	$2.74383 + 10.48610I$	$3.00784 - 8.49174I$
$u = -1.101670 - 0.589261I$ $a = -2.50240 + 0.70880I$ $b = -0.527845 - 1.156650I$	$2.74383 - 10.48610I$	$3.00784 + 8.49174I$
$u = -1.123580 + 0.572511I$ $a = 0.627078 + 1.120360I$ $b = 0.896517 + 0.252922I$	$-5.03545 + 9.55347I$	$-4.20919 - 6.36695I$
$u = -1.123580 - 0.572511I$ $a = 0.627078 - 1.120360I$ $b = 0.896517 - 0.252922I$	$-5.03545 - 9.55347I$	$-4.20919 + 6.36695I$
$u = -0.068807 + 0.735625I$ $a = 0.599542 - 0.271859I$ $b = 0.657434 + 0.786735I$	$-5.68233 - 2.52073I$	$-2.77619 + 3.16598I$
$u = -0.068807 - 0.735625I$ $a = 0.599542 + 0.271859I$ $b = 0.657434 - 0.786735I$	$-5.68233 + 2.52073I$	$-2.77619 - 3.16598I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.127870 + 0.601926I$ $a = 2.30965 - 0.72062I$ $b = 0.581039 + 1.195430I$	$-2.1965 - 14.9450I$	$0. + 9.66907I$
$u = 1.127870 - 0.601926I$ $a = 2.30965 + 0.72062I$ $b = 0.581039 - 1.195430I$	$-2.1965 + 14.9450I$	$0. - 9.66907I$
$u = 0.092103 + 0.448304I$ $a = -0.983082 + 0.405423I$ $b = -0.301747 + 0.738058I$	$0.260137 + 1.355870I$	$2.16052 - 5.21178I$
$u = 0.092103 - 0.448304I$ $a = -0.983082 - 0.405423I$ $b = -0.301747 - 0.738058I$	$0.260137 - 1.355870I$	$2.16052 + 5.21178I$

II. $I_2^u = \langle -42u^5a^2+6u^5a+\cdots-33a-16,\ u^5a+u^5+\cdots+a+1,\ u^6-u^5-u^4+2u^3-u+1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^3 \\ -u^3+u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^3 \\ -u^5+u^3-u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} a \\ 0.531646a^2u^5 - 0.0759494au^5 + \cdots + 0.417722a + 0.202532 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.202532a^2u^5 + 0.113924au^5 + \cdots + 0.873418a + 1.69620 \\ -0.354430a^2u^5 + 0.0506329au^5 + \cdots - 0.278481a + 0.531646 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.151899a^2u^5 + 1.16456au^5 + \cdots + 0.594937a + 2.22785 \\ -0.0886076a^2u^5 + 1.01266au^5 + \cdots - 0.569620a + 0.632911 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^3 \\ u^5-u^3+u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.430380a^2u^5 - 0.632911au^5 + \cdots + 1.48101a + 0.354430 \\ 0.708861a^2u^5 + 0.898734au^5 + \cdots + 0.556962a + 0.936709 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.430380a^2u^5 - 0.632911au^5 + \cdots + 1.48101a + 0.354430 \\ 0.708861a^2u^5 + 0.898734au^5 + \cdots + 0.556962a + 0.936709 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^4 - 4u^2 + 4u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$(u^6 - u^5 - u^4 + 2u^3 - u + 1)^3$
c_2	$(u^6 + 3u^5 + 5u^4 + 4u^3 + 2u^2 + u + 1)^3$
c_3, c_4, c_5 c_8, c_{10}	$u^{18} + 6u^{16} + \cdots + u + 1$
c_7	$(u^6 + u^5 - u^4 - 2u^3 + u + 1)^3$
c_9	$u^{18} - 12u^{17} + \cdots + u + 1$
c_{11}	$(u^6 - 3u^5 + 5u^4 - 4u^3 + 2u^2 - u + 1)^3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_7	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)^3$
c_2, c_{11}	$(y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)^3$
c_3, c_4, c_5 c_8, c_{10}	$y^{18} + 12y^{17} + \cdots - y + 1$
c_9	$y^{18} - 12y^{17} + \cdots - y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.002190 + 0.295542I$ $a = 1.172640 + 0.086416I$ $b = 0.115801 - 1.253200I$	$-1.89061 + 0.92430I$	$-3.71672 - 0.79423I$
$u = -1.002190 + 0.295542I$ $a = -1.36195 + 0.61543I$ $b = -0.528367 + 0.395250I$	$-1.89061 + 0.92430I$	$-3.71672 - 0.79423I$
$u = -1.002190 + 0.295542I$ $a = 1.55971 + 1.42467I$ $b = 0.412566 + 0.857945I$	$-1.89061 + 0.92430I$	$-3.71672 - 0.79423I$
$u = -1.002190 - 0.295542I$ $a = 1.172640 - 0.086416I$ $b = 0.115801 + 1.253200I$	$-1.89061 - 0.92430I$	$-3.71672 + 0.79423I$
$u = -1.002190 - 0.295542I$ $a = -1.36195 - 0.61543I$ $b = -0.528367 - 0.395250I$	$-1.89061 - 0.92430I$	$-3.71672 + 0.79423I$
$u = -1.002190 - 0.295542I$ $a = 1.55971 - 1.42467I$ $b = 0.412566 - 0.857945I$	$-1.89061 - 0.92430I$	$-3.71672 + 0.79423I$
$u = 0.428243 + 0.664531I$ $a = -1.25605 - 1.08267I$ $b = -0.402290 + 1.103490I$	$1.89061 + 0.92430I$	$3.71672 - 0.79423I$
$u = 0.428243 + 0.664531I$ $a = -0.73391 + 1.51018I$ $b = -0.293594 - 1.224710I$	$1.89061 + 0.92430I$	$3.71672 - 0.79423I$
$u = 0.428243 + 0.664531I$ $a = 0.153991 + 0.113906I$ $b = 0.695884 + 0.121220I$	$1.89061 + 0.92430I$	$3.71672 - 0.79423I$
$u = 0.428243 - 0.664531I$ $a = -1.25605 + 1.08267I$ $b = -0.402290 - 1.103490I$	$1.89061 - 0.92430I$	$3.71672 + 0.79423I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.428243 - 0.664531I$ $a = -0.73391 - 1.51018I$ $b = -0.293594 + 1.224710I$	$1.89061 - 0.92430I$	$3.71672 + 0.79423I$
$u = 0.428243 - 0.664531I$ $a = 0.153991 - 0.113906I$ $b = 0.695884 - 0.121220I$	$1.89061 - 0.92430I$	$3.71672 + 0.79423I$
$u = 1.073950 + 0.558752I$ $a = -0.746547 + 0.100402I$ $b = 0.274969 - 1.288580I$	$-5.69302I$	$0. + 5.51057I$
$u = 1.073950 + 0.558752I$ $a = -0.586060 + 1.174340I$ $b = -0.750911 + 0.211085I$	$-5.69302I$	$0. + 5.51057I$
$u = 1.073950 + 0.558752I$ $a = 2.79818 - 0.51224I$ $b = 0.475942 + 1.077500I$	$-5.69302I$	$0. + 5.51057I$
$u = 1.073950 - 0.558752I$ $a = -0.746547 - 0.100402I$ $b = 0.274969 + 1.288580I$	$5.69302I$	$0. - 5.51057I$
$u = 1.073950 - 0.558752I$ $a = -0.586060 - 1.174340I$ $b = -0.750911 - 0.211085I$	$5.69302I$	$0. - 5.51057I$
$u = 1.073950 - 0.558752I$ $a = 2.79818 + 0.51224I$ $b = 0.475942 - 1.077500I$	$5.69302I$	$0. - 5.51057I$

III. $I_3^u = \langle u^3 + b,\ -u^3 - u^2 + a + u + 1,\ u^4 - u^2 + 1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^3 \\ -u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^3 + u^2 - u - 1 \\ -u^3 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^2 - u + 1 \\ 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^3 - u^2 - u + 1 \\ -u^3 + u + 1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^3 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^2 - u - 1 \\ -u^3 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^2 - u - 1 \\ -u^3 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4u^2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6, c_{11}	$u^4 - u^2 + 1$
c_2	$(u^2 + u + 1)^2$
c_3, c_4, c_5 c_8, c_{10}	$(u^2 + 1)^2$
c_7	u^4
c_9	$(u + 1)^4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_{11}	$(y^2 - y + 1)^2$
c_2	$(y^2 + y + 1)^2$
c_3, c_4, c_5 c_8, c_{10}	$(y + 1)^4$
c_7	y^4
c_9	$(y - 1)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.866025 + 0.500000I$ $a = -1.36603 + 1.36603I$ $b = -1.000000I$	$-2.02988I$	$2.00000 + 3.46410I$
$u = 0.866025 - 0.500000I$ $a = -1.36603 - 1.36603I$ $b = 1.000000I$	$2.02988I$	$2.00000 - 3.46410I$
$u = -0.866025 + 0.500000I$ $a = 0.366025 - 0.366025I$ $b = -1.000000I$	$2.02988I$	$2.00000 - 3.46410I$
$u = -0.866025 - 0.500000I$ $a = 0.366025 + 0.366025I$ $b = 1.000000I$	$-2.02988I$	$2.00000 + 3.46410I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6	$(u^4-u^2+1)(u^6-u^5+\cdots-u+1)^3(u^{44}+2u^{43}+\cdots+3u+2)$
c_2	$(u^2+u+1)^2(u^6+3u^5+5u^4+4u^3+2u^2+u+1)^3$ $\cdot(u^{44}+20u^{43}+\cdots-19u+4)$
c_3, c_4, c_8	$((u^2+1)^2)(u^{18}+6u^{16}+\cdots+u+1)(u^{44}-u^{43}+\cdots-16u+1)$
c_5, c_{10}	$((u^2+1)^2)(u^{18}+6u^{16}+\cdots+u+1)(u^{44}-u^{43}+\cdots-2u+1)$
c_7	$u^4(u^6+u^5+\cdots+u+1)^3(u^{44}-2u^{43}+\cdots-496u+32)$
c_9	$((u+1)^4)(u^{18}-12u^{17}+\cdots+u+1)(u^{44}-21u^{43}+\cdots-6u+1)$
c_{11}	$(u^4-u^2+1)(u^6-3u^5+5u^4-4u^3+2u^2-u+1)^3$ $\cdot(u^{44}+6u^{43}+\cdots+352u+128)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$(y^2-y+1)^2(y^6-3y^5+5y^4-4y^3+2y^2-y+1)^3$ $\cdot\,(y^{44}-20y^{43}+\cdots+19y+4)$
c_2	$(y^2+y+1)^2(y^6+y^5+5y^4+6y^2+3y+1)^3$ $\cdot\,(y^{44}+8y^{43}+\cdots-417y+16)$
c_3, c_4, c_8	$((y+1)^4)(y^{18}+12y^{17}+\cdots-y+1)(y^{44}+41y^{43}+\cdots-90y+1)$
c_5, c_{10}	$((y+1)^4)(y^{18}+12y^{17}+\cdots-y+1)(y^{44}+21y^{43}+\cdots+6y+1)$
c_7	$y^4(y^6-3y^5+5y^4-4y^3+2y^2-y+1)^3$ $\cdot\,(y^{44}-18y^{43}+\cdots-81664y+1024)$
c_9	$((y-1)^4)(y^{18}-12y^{17}+\cdots-y+1)(y^{44}+9y^{43}+\cdots+26y+1)$
c_{11}	$(y^2-y+1)^2(y^6+y^5+5y^4+6y^2+3y+1)^3$ $\cdot\,(y^{44}+4y^{43}+\cdots+400384y+16384)$